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Author(s): Henry Chandlee Forman
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THE BEGINNING OF AMERICAN ARCHITECTURE[1]

By Henry Chandlee Forman

THE history of American architecture commences on May 14, 1607, with the bivouacking of Edward Maria Wingfield, first president of the King's Council for Virginia, and his companions, among the malarial swamps of Jamestown Island. From that day when, unknowingly, they founded the first permanent English settlement in the United States, until Christmas Day, 1620, thirteen years later, when the Pilgrim Fathers began to erect their first house at Plymouth, American architecture was as fundamentally medieval as the ancient churches of the Anglo-Saxons. In truth, it is no exaggeration to compare the earliest Jamestown buildings with those of the Anglo-Saxons, because many were fashioned, *ipso facto,* in the manner of those people of a thousand years before.

The early fabrics, roughly put together among the Jamestown marshes, represent the first chapter in the history of the architecture of the United States of America; as such, they should be familiar to students of American art and history. Recently it has been aptly pointed out that the enlarged conception of history now in vogue precludes any indifference on the part of scholars of American history to matters which were of such vital importance to the early founders of this country as the form and construction of their dwellings. When the "ancient planters" established James Fort, as their settlement was called, on a promontory of the Island of Jamestown, and raised other settlements on James River and Eastern Shore, they had recourse to *at least* five different types of English medieval architecture. The names of these kinds of construction are the palisade, the puncheon, the cruck, timber-framing and part-brick-and-part-framing.

Undoubtedly the palisade or stockade was the first type of medieval architecture employed in the land of Virginia. It was used at Jamestown in 1607, and from then until the abandonment of the city in 1699 as the colonial capital. We find that the small fort at Old Point Comfort (1609), the town walls of Henrico or Henricopolis (1611) and the first church on the Eastern Shore of Virginia were constructed by this method. That the palisade

[1] A chapter from the author's forthcoming book, *The Medieval Architecture of the Old South.* Introduction by C. R. Morey.

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was common throughout the countryside is indicated by the governmental edicts of 1624 and 1626 "to palisade in" all dwelling houses. This expression means to surround all habitations with stockaded walls about seven and a half feet high, or more. The English called them "Park-pales." In this way each plantation comprised a little fort against Indian depredations.

Noteworthy must have been the appearance of the triangular James Fort, within the "pallizadoes" of which lay the cradle of the United States. The south side faced the muddy James and measured four hundred twenty feet; the other two sides were each three hundred feet long. At the corners rose bulwarks, sometimes called watchtowers or blockhouses, carrying wooden platforms with mounted cannon. The chief doorway was in the middle of the south curtain wall, and each bulwark had a gateway as well. A moat or deep trench encircled the entire fortification.

In structure, the palisades of James Fort comprised strong posts and planks embedded four feet deep in the earth, and standing about fourteen feet high. In order that armed guards could swiftly traverse the palisades, there were passages on the inside of the curtains. The bulwarks, made of giant timbers, surmounted these passages.

Another kind of palisade was incorporated in the walls of the first church on the Eastern Shore, built probably in 1623. Vertical posts were set close together and interwoven with wattles or small branches, daubed with clay.

When they resorted to palisades, the founding fathers of old Virginia continued an unbroken custom of their ancestors reaching back in time through the Gothic and Norman eras to the Anglo-Saxon period. It is said that upon the conquest of Britain in A.D. 447, the Saxons, ignoring the empty Roman villas, set up their own hovels with walls of split tree trunks placed vertically side by side. At the Battle of Hastings, Harold, last of the Saxon kings, entrenched himself behind deep ditches and "artful" palisades. At any rate, the palisade is the oldest form of wooden construction known today in England, and is derived from Paleolithic Europe.

Fortunately for the antiquarian, one Anglo-Saxon wooden building remains. The nave of the little parish church of St. Andrews at Greensted, Ongar, Essex, England, is probably the timber chapel built about 1013 to commemorate the passing of St. Edmund's body through the town of Ongar. The walls are of split oak timbers set upright on a modern sill.

The second medieval type of construction employed in Virginia is much like the first. This method is building with puncheons, sometimes called "punches" or "quarters." We find them in 1619 at Berkeley on James

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River. In this small town there were certain houses merely "covered with boards," which were so inflammable that one firebrand would have been enough to touch them off. Other dwellings were "only made of wood," and had "punches sett into the Ground." Now, in medieval England puncheons were upright timbers set into the earth, so that the space between them was about equal to the width of the timber itself. That is, if the timber was twelve inches wide, then the distance between the two timbers was likewise about twelve. Another name for this method is "post and pan," where the post is the same size as the panel. Usually the intervening spaces were filled with wattle-and-daub. Wattles comprise a basket work of hazel bands fastened between the upright timbers, which were grooved for the purpose. Then the wattles were daubed on both sides with a plaster made of lime and loam mixed with chopped straw. At least, this method was prevalent in Surrey, England; and the Virginia procedure must have been much the same. Be that as it may, puncheoning was nothing but a pseudo-palisading.

Captain John Smith, who for so long endeavored to take more than his share of credit for the Virginia enterprise, introduces to us the third medieval type of structure in Virginia. The colonists, he declares, for their church of 1607 "built a homely thing like a barne, set upon Cratchets, covered with raftes, sedge and earth." He also notes that the walls were covered with the same materials, and that the best of the houses were of like curiosity. The *Oxford Dictionary* reveals that the word "cratchet" is a seventeenth-century variation of "crotchet" or "crotch," meaning a forked pole to support the ridgepole of a dwelling. Morison of Harvard (and the writer as well) believes that Smith, writing of cratchets, was thinking of "crucks." To be specific, the cruck was a later, fourteenth-century development of the crotchet, and comprised, not a forked pole, but a pair of bent or curved tree trunks placed together in the form of a Gothic arch. In fact by 1600 the English had all but discarded the crotchet and were employing the cruck system. It is logical to believe that the Jamestonians employed the fourteenth-century cruck, rather than the earlier crotchet. For all that, both were purely medieval.

In England cottages still stand on crucks after four hundred years. In the middle of Elizabeth's reign a survey made of the village of Crakehon in north England indicated that every house and barn stood upon "crocks" and were covered with thatch. Today random examples of existing crucks may be mentioned: the fourteenth-century manor houses of Oldcourt Farm, Ty-Mawr and Wood House Farm, all of Herefordshire; or sixteenth-century Daren Farm barn in the same county; or the seventeenth-century dwellings at Hemington in Leicestershire, and Colemere in Shropshire. These are a few

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specimens in a country where crucks until the year 1700 dotted the landscape, especially in the west and north.

The simplest English cruck dwelling, one bay in length, comprised two pairs of bent tree trunks, in shape like the lancet arches of a Gothic cathedral, set upon the ground, strengthened by tie-beams and fastened by wooden pegs. There is a clear analogy between the cathedral, with its arches and series of bays, and the cruck house, also with pointed arches and bays. It is a coincidence, perhaps, that the curved shape of a cruck structure appeared like the inverted hull of a ship, and the word nave, like the nave of a cathedral, is derived from the Latin, *navis,* ship. The whole genealogy of the cruck has a strong medieval flavor.

In conjunction with the medieval bay there is an interesting story. This unit of space measured about sixteen feet, because that was the room needed to house two pairs of oxen. Whereas the ox-house, called the "shippon," a term perhaps reminiscent of the ship-shape of the cruck building, was often under the same roof as the dwelling, the practice developed in medieval England of making of uniform length all the bays under the same roof. The adoption of a standard unit helped the real estate dealers of the Middle Ages, who could advertise, for instance, that Oldcourt Farm comprised four bays—a four-bay manor. When a twelve-bay manor was purchased, one knew how long it extended without further description.

At James Fort the number of bays in church and other fabrics was limited by the known size of the palisade. It would appear that owing to lack of elbow-room the church of 1607 could not have been more than four bays, or about sixty-four feet. Lord Delaware's later church, of 1610, measured only sixty feet by twenty-four. In addition, at James Fort the rows of dwellings, or streets of "settled houses," could not have been more than ten bays each, along two sides of the palisade. At the very most the river-front side could not have had more than fourteen bays. Accordingly, it is possible that in 1607 Jamestown had about thirty-four row lodgings, each about sixteen feet square. And the best of these were cruck buildings.

Another feature of the Middle Ages that these primitive structures usually possessed was the thatched roof, bound and reeded as in old England. When James City burned on January 4, 1608, the fire spread easily from one thatched roof to another. All but three cabins were consumed like paper. It is surmised that something more than wooden chimneys caused this conflagration: there were Spanish spies at Jamestown.

The old English word "timbran" meant "to timber," or "to build." Timber-framing, the next logical step in the development of puncheon and

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cruck, is the fourth medieval type of architecture known in earliest Virginia. As the great forests of England began to dwindle, it was discovered that the vertical posts in a house need not be placed close together, as in puncheoning, but could be widely spaced and reinforced by diagonal braces. Such buildings became known as timber-framed, where the posts, studs and sills were tied together with wooden pegs. In the case of the cruck habitation, the outside walls were built up with widely spaced timbers, to the extent that the crucks could be taken away altogether, leaving a timber-framed house.

The town of Berkeley on the James had, besides puncheoned dwellings, two structures which were mentioned in 1619 as being timber-framed. Virginians called them "English houses" or "fair houses." The swing of the English to timber-framing in the latter part of the sixteenth century—although, of course, the constructional method was then not new—is reflected in the Jamestown of 1611, which had "two faire rows of howses, all of framed Timber, two stories, and an upper Garret, or Corne loft high." At Henricopolis in the same year were "3 streets of well framed houses"; At Rocke Hall, "a faire framed parsonage," and at Bermuda City, also on the James, "very faire houses." Although always to remain "castles in the air," the guest houses or inns ordered in 1620 by the Virginia Company of London were likewise to be timber-framed, in the following manner: "Each Plantation shall each of them build, at their common charge, labour and industry, frame, build and perfect . . . a guest house, for the lodging and entertaining of fifty persons in each, upon their first arrival." Each housing was to be one hundred eighty feet in length and sixteen wide, or, in other words, roughly ten bays. At suitable locations five chimneys were to be erected, and windows were to be well placed for ventilation. A bit of local color was added to the instructions in the specification that each guest house was to contain twenty-five bedsteads, four feet by six, standing two feet from the ground, with board partitions between them. The use of earth as floor recalls certain medieval halls where dirt was covered with rushes.

Not only did the art of timber-framing comprise the setting up of upright posts at some distance apart, the tenoning of them into a sill at the bottom and a wall-plate at the top, but it also comprised a filling between, or a covering over, the posts. The fact that one kind of filling was common in this period is certain from Strachey's reference (1610-11) to buildings which were "pargetted and plaistered with Bitumen [a kind of asphalt] or tough clay." As already noted, this is the wattle-and-daub method, oldest known technique of filling interstitial spaces in England.

Since Virginia summers are hot, such wattle panels in timber-framed

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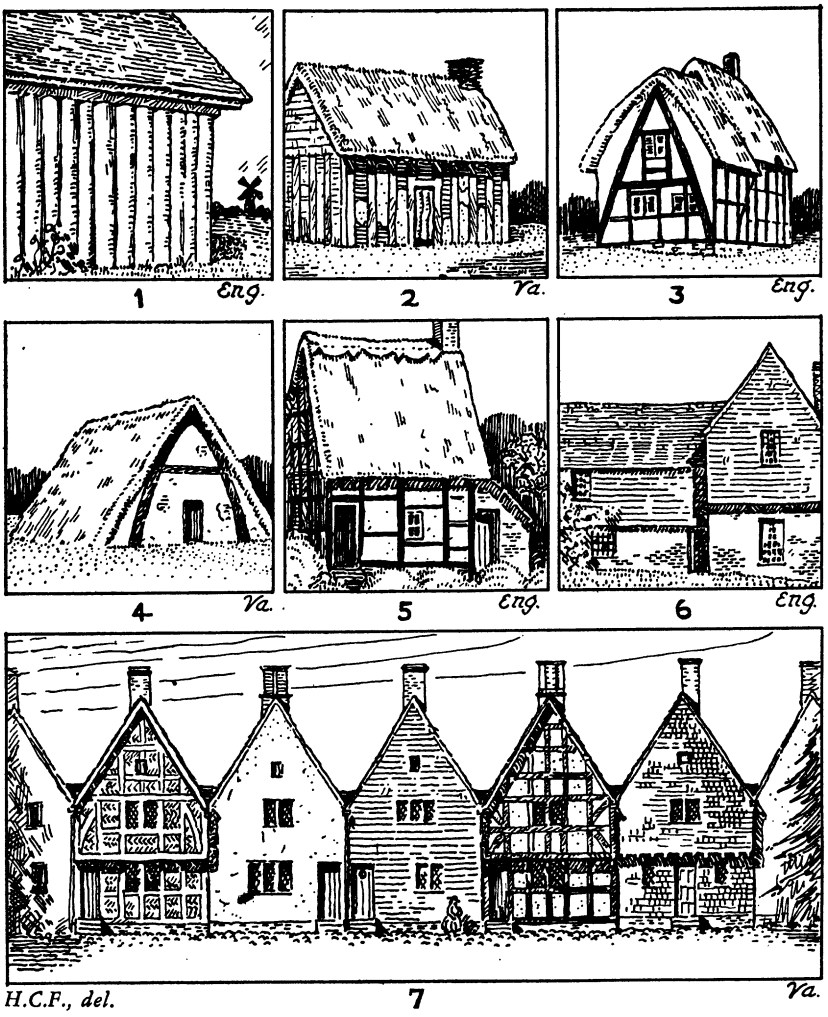

MEDIEVAL TYPES OF CONSTRUCTION EMPLOYED BEFORE 1620 IN VIRGINIA

1. Church of St. Andrews, Greensted, Essex, England, c.1013, showing Anglo-Saxon palisades.

2. A puncheoned cottage with wattle-and-daub filling, Virginia, 1619. (Conjectural reconstruction by author).

3. A cruck house near Tewkesbury, Gloucestershire, England.

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dwellings heated up "like Stoves"; and it seems likely that wattle-and-daubing was soon discarded for other better types of insulation. In England at the time, several other fillings or coverings for timber-framing were in vogue, such as: brick nogging, laid either horizontally or in herringbone fashion; ordinary plaster; shingle tiles hung from battens nailed across the posts; or weather-boards (clapboards). Since all these materials were manufactured in 1611 in Virginia, timber-framed buildings could have been constructed with any of them.

In the weatherboarded dwelling it was customary to fill with an insulating material in just the way that we today pump our walls full of rock-wool. On the James, mud, brick or coarse salt-marsh grass could have been employed in the earliest years. This last method, the grass-stuffed wall, was used in 1627 in Massachusetts. Jamestonians, surrounded by seven hundred fifty acres of island swamps, must have also employed grass.

The last known medieval construction before 1620 in Virginia is what may be termed "half-and-half" work, that is, part brick and part timber-framing. In 1611 at Henricopolis, men constructed not only three streets of well-framed dwellings, but also "competent and decent houses, the first storie all of bricks." Of course the "half-and-half" type formed the transition between the timber-framed dwelling and the all-brick. That there were all-brick edifices in Virginia before 1620 we do not know, but, since brick was manufactured at James City from the first, there is that probability. At any rate, the "half-and-half" fabric was an advance over ordinary timber-framing, and the method was common enough in late medieval England. For example, the manor-house of Saint Aylotts (*c.* 1500), at Saffron Walden, Essex, is a "House of two storeys: the lower storey is of brick and the upper storey timber-framed and plastered."

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4. Jamestown, Virginia, 1607. Cruck church. (Conjectural reconstruction by author).

5. Timber-framed, one-bay cottage, Colemere, Shropshire, England, late 17th century.

6. Bostall Farm, Woolwich, City of London, late 16th century or early 17th, showing part-brick-and-part-frame construction.

7. Jamestown, Virginia, 1611. A "faire row" of framed houses, illustrating five types of timber-framing most commonly used about 1600 in England. Left to right: half-timber work with brick filling; plaster; weatherboarding or clapboards; half-timber work with plaster; tile-hung. (Conjectural reconstruction by the author).

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If you had sailed up the James River during the thirteen years before the Pilgrim Fathers landed at Plymouth Rock, you would have caught a glimpse of a great variety of picturesque structures on the green banks. From the deck you would have descried on Jamestown Island the palisaded fortification, adorned with great timber blockhouses. There would have been visible town and country houses with walled-in gardens and with orchards, called "hortyards," tobacco barns, corn houses, servants' quarters, warehouses and storehouses. You would have also discerned churches, windmills, sawmills, bloomeries, glassworks, guest houses, taverns, alehouses, stores, shops, silk houses, courts of guard or guard houses, public granaries, tenements and wharves, called "bridges." If you ascended the river as far as Henricopolis, you would have seen the East India School and the College.

If you had examined these structures closely, you would have found them medievally built in the five methods already described, and possibly in other manners not recorded. This account is, therefore, in brief the story of the birth of American architecture—born in that "Cradle" of a Republic of Thirteen Colonies, the United States of America.

Agnes Scott College
Decatur, Ga.

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